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EXAMINER
HOANG, PHUONG N

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2009*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 27 and 29 - 35* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 27 and 29 - 35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 27 and 29 - 35 are pending for examination.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on

10/20/2009 has been entered.

Specification

3.   The abstract of the disclosure is objected to because it includes legal

phraseology such as 'comprising", "said". Correction is required. See MPEP

§ 608.01(b).

4.   The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: **As to claim 10**, line 1 – 2, examiner could not find

anywhere in the specification wherein the search engine can add resources common to

a current set of users. The search engine is well-known in the art that it only searches

the match and return hits. As to claim 7, the discovery unit add resources and remove

users, not the search engine itself.   For examination purpose, examiner treats the

limitation as "the discovery unit" does the adding.

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Claim Objections

5.   **Claim 1 - 12, 17 - 24, 32, 33, 29 - 31 are objected to because of the following**

informalities:

6.   Claim 1, line 6 and 12, "users" and "resources" should be --the users-- and --the

resources--.

7.   Claim 29, lines 3, "nodes" should be "the nodes" or --said nodes--.

8.   Claim 30, line 9, "the nodes" has improper antecedent basis.

9.   claim 31,

      a.   line 4, "the user" has improper antecedent basis.

      b.   line 5, "users" should be "the users".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

10.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

11.   Claims 1 - 27, 29 – 35 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains

subject matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the

time the application was filed, had possession of the claimed invention.

12.   **As to claim 1**, line 15, examiner could not anywhere in the specification the

amended limitation "automatically determined".   Examiner only found that the method

doing by administrator (0055).

13.   **As to claims 25 – 26, 29 – 31, 34 - 35**, examiner could not anywhere in the

specification the amended limitation "automatically determined".

Claim Rejections - 35 USC § 102

14.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15.   **Claims 1 – 7, 10, 17 - 18, 25 - 27, 29 – 35 are rejected under 35 U.S.C. 102(e)**

as being anticipated by Stone, US pub. no. 2003/0233439.

16.   Stone reference was cited in previous office action.

17.   **As to claim 1**, Stone teaches a computer apparatus configured to discover roles

from structure existing amongst users to whom resources have been assigned, the

apparatus comprising:

a processor (inherent to execute the computer);

a discovery unit, operable via said processor, configured for searching for

patterns within links between users and said resources partitioned into a set of nodes of

users and a set of nodes of resources (directory services system 32 provides a search

engine for supporting access of user resources, client links to documents, web pages or

other resources in an index, table of contents or a topical hierarchy, 0056 – 0057, 0060

- 0061, 0077, 0093) wherein:

each user of said set of nodes of users comprises a node with an

assignment of resources from the set of nodes of resources (user accesses to multiple

resources, 0059);

the links comprise said assignments between respective users and

resources (a user group is authenticated for access to a resource, 0057);

a grouping unit, associated with said discovery unit, configured to use said

discovered patterns to form at least one group from said user nodes or said resource

nodes using said discovered patterns, (template can be used to form new user group,

0093 - 0095), such that (examiner notes that this is intended use):

> users or resources having all or a subset of at least two links to common
>
> resources or users are automatically determined (automatically apply, 0098) to
>
> be placed into a same group (assigns user rights and group rights to accessing
>
> or editing corresponding data/resources, 0059 - 0061, 0063, 0089);
>
> the users or resources of the at least one group did not exist as a group
>
> prior to the discovery unit searching for patterns within the links (new group,
>
> 0094);

an output unit configured for outputting said at least one group of users or

resources as a role (new groups, 0094).

18.   **As to claim 2**, Stone teaches wherein said links comprises access permissions

(permissions, 0059).

19.   **As to claim 3**, Stone teaches wherein links comprises usage levels of respective

resources by respective users (user access applications/resources, 0059).

20.   **As to claim 4**, Stone teaches wherein links comprises user access permission

levels for respective users (permission, 0059).

21.   **As to claim 5**, Stone teaches wherein said role is definitive of a use role on said network (network, 0097).

22.   **As to claim 6**, Stone teaches wherein said user nodes comprise entities having attributes, and said links comprises a respective user possessing a respective attribute (assign user rights and group rights to accessing or editing corresponding data, 0063, 0089).

23.   **As to claim 7**, Stone teaches said discovery unit is associated with a search engine (directory services system 32 comprises a search engine, 0056, 0077, 0093) operable to use a search tree (tree, 0032) to begin with a single resource and its associated users, and iteratively to add resources and remove users not having a predefined relationship with said iteratively added resources, to meet a resource number, or a user number constraint (add or remove users as part of user maintenance, 0060, 0088, 0097).

24.   **As to claim 10**, Stone teaches wherein said search engine is operable within said iterative stages to add further resources common to a current set of users (add or remove users as part of user maintenance, 0060, 0088, 0097).

25.   **As to claim 17,** Stone teaches wherein said discovery unit is operable to use said pattern recognition within an iterative tree searching process (directory services

system 32 comprises network directory service (NDS) presented in tree structure, and

directory services system comprise the search engine, 0056 – 0057, 0060 - 0061, 0077,

0093);

26.   **As to claim 18**, Stone teaches wherein said discovery unit is operable to insert

said groupings as an intermediate set amongst said nodes (add or remove users as part

of user maintenance, 0060, 0088, 0097).

27.   **As to claim 25**, Stone teaches a role discovery method for electronically

grouping nodes according to existing relationships with resources, the method

comprising:

    Discovering existing relationship patterns between an arrangement of nodes and

resources across a partition between said node and resources, wherein the patterns are

discovered from predetermined relationships between ones of said resources and

corresponding nodes (directory services system 32 provides a search engine for

supporting access of user resources, client links to documents, web pages or other

resources in an index, table of contents or a topical hierarchy, 0056 – 0057, 0060 -

0061, 0077, 0093);

    using said discovered patterns, automatically determining (automatically apply,

0098) groupings of said arrangement of nodes, wherein nodes within said groupings

share relationships with at least two common resources (template can be used to form

new user group, and administrator assigns user rights and group rights to accessing or

editing corresponding data/resources, 0059 - 0061, 0063, 0089, 0093 - 0095),

wherein the nodes of each of the groupings did not exist as a group prior to the

discovery the existing relationship patterns (new group, 0094);

outputting said grouping of nodes having common patterns of at least two

existing relationship as a role (new groups, 0094).

28.   **As to claim 26**, this is the hardware claim of claim 1. See rejection for claim 1

above.

29.   **As to claim 27**, Stone teaches a computer device comprising:

a processor (inherent to run the computer device);

a first series of user definitions, each user in said definitions defined as a user

node (user, 0094 - 0095);

a second series of resource definitions, each resource in said definitions defined

as a resource node (applications, 0094 - 0095);

access data indicating access of users to respective resources (user group that

have similar attribute values or application access, 0094);

a pattern recognition unit operable with said processor for recognizing pre-

existing patterns in said access data (template, 0094 - 0095) said patterns indicative of

a way of grouping said user nodes of said each user so as to discover groups of user

nodes having common subsets of access data of at least two resources (template can

be used to form new group, and user group is authenticated for access to a resource,

and the user resources can be searched, 0056 - 0057, 0060 – 0061, 0084, 0089, 0095);

    wherein the user nodes of the discovered groups did not exist as a group prior to

recognizing the pre-existing patterns in the access data (new user group, 0094);

    a group definition unit operable with said processor and said pattern recognition

unit configured to output groups so discovered as roles (new user group, 0094 – 0095).

30.   **As to claim 29**, this is the apparatus claim of claim 25. See rejection for claim

25 above.

31.   **As to claim 30**, Stone teaches a group discovery method comprising:

    electronically searching for links between nodes partitioned into a first data set

and a second data set, wherein: said links exist between nodes in the first data set and

nodes in the second data set (directory services system 32 provides a search engine for

supporting a selection of user resources or client links to documents, web pages or

other resources in an index, table of contents or a topical hierarchy, 0056 – 0057, 0060

- 0061, 0077, 0093);

    automatically determining (automatically apply, 0098) a grouping of nodes in said

first set according to respective links found by the electronic searching (the directory

services system provides search engine to support the selection of user resources,

searching or browsing the template, 0056 – 0057, 0060 - 0061, 0077, 0093) such that

(examiner notes that this is intended use) all nodes in said first set having links to at

least two commonly held nodes (user accesses to multiple resources, 0059) in said

second set are assigned to a same group, thereby discovering groups in said data

(template can be used to form new groups that have similar attribute value, 0094);

wherein the nodes of the grouping did not exist as a group prior to electronically

searching for the links (new group, 0094).

32.   **As to claim 31**, Stone teaches a method of grouping users having links or

attributes into one or more groups based on said links or attributes, the method

comprising:

searching for links or attributes of the users, wherein the links or attributes of

each user characterize an association between user and resources (directory services

system 32 provides a search engine for supporting access of user resources, client links

to documents, web pages or other resources in an index, table of contents or a topical

hierarchy, 0056 – 0057, 0060 - 0061, 0077, 0093);

automatically determining (automatically apply, 0098) a group for users sharing

all or a subset of at least two of said links or attributes (user accesses to multiple

resources, [0059]) discovered by the searching step (user group is authenticated for

access to a resource, and the user resources can be searched, 0056 - 0057, 0060 –

0061, 0084, 0089, 0095);

wherein the users of the group did not exist as a group prior to searching for the

links (new group, 0094);

outputting said automatically determined group (template can be used to form

new groups, 0094, 0095).

33.   **As to claim 32**, see rejection for claim 7 above.

34.   **As to claim 33**, Stone teaches wherein said outputting said group comprises

outputting a characteristic of said group (new groups, 0094).

35.   **As to claim 34**, this is the method claim of claim 30. See rejection for claim 30

above.

36.   **As to claim 35**, this is the apparatus claim of claim 30. See rejection for claim

30 above.

Claim Rejections - 35 USC § 103

37.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

38.   **Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Stone, US pub. no. 2003/0233439.

39.   **As to claim 19**, Stone teaches wherein said users and said resources are

arranged into three sets (tree structure has at least three sets, 0032), an intermediate

one of said sets comprising predetermined relationship dependent groupings of at least

some of the users in a first of said sets (users access to assigned

resources/applications, 0095).

Stone does not explicitly teach add new groups to said intermediate set.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to recognize that adding new groups can be in any set depending

on accessed levels and requirements of new groups.

40.   **Claims 8 – 9, 11 - 12 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Stone, US pub. no. 2003/0233439 in view of Franklin, US pub.

no. 2001/0023440.

41.   **As to claim 8 and 9**, Stone does not explicitly teach the search engine is

operable to use a homogeneity measure to determine whether to consider a candidate

grouping in said search.

Franklin teaches the search engine is operable to use a homogeneity measure to

determine whether to consider a candidate grouping in said search (search engines

106, may include sophisticated methodologies for creating and executing theories to

locate specific objects 92 in an object tree 90 within a directory services system, 0050).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Stone and Franklin because Franklin's

search engine with executing theories to locate specific objects would determine

whether to consider a candidate grouping during the search (0050).

42.   **As to claim 11**, Franklin teaches wherein said search engine is operable to

compute a set of all users related to a current set of resources (search returns a list of

match, 0050).

See motivation for claim 8 above.

43.   **As to claim 12**, Franklin teaches wherein said search engine is operable to

consider for expansion all resources outside said current set of resources that have at

least one relationship connection with a current set of users (0050 and 0059).

See motivation for claim 8 above.

44.   **Claims 20 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Stone, US pub. no. 2003/0233439 in view of Brown, US patent no. 5,941,947.

45.   Brown reference was cited in previous office action.

46.   **As to claim 20**, Stone does not explicitly teach wherein the input is associated

with a graphical expositor which presents the input in a graph.

Brown teaches wherein the graphical expositor presents the input in a graph

(acyclic graphs, col. 12 lines 51 – col. 13 line 38).

It would have been obvious to one of skill in the art at the time the invention was

made to combine the teaching of Stone and Brown's system because Brown's graph

would provide the graph structure with partitioned groups on different levels for easy

input to the tree structure of Stone's system to control the network nodes partitions and

searchable.

47.   **As to claim 21**, Stone teaches the user would manually interact using graphical

to manually assign modify the groupings discovered by the pattern recognition engine

(administrator uses to tool to add user, 0038).

48.   **As to claims 22 - 23**, Brown teaches the steps of wherein the graphical

expositor is further operable to partition the graph into sub-graphs (each child node in

hierarchical directory structures in the form of directed acyclic graphs, is a sub-graph,

col. 12 lines 51 – col. 13 line 38), each of the sub-graphs itself being a mentioned graph

having at least two partitions, sub-graphs being limited to it subset of the nodes in one

of the partitions, and further comprising all the nodes in the other partition that are linked

thereto, and wherein the pattern recognition unit is further operable to perform

groupings on each of the sub-graphs, and then to merge the results into a full graph (the

whole hierarchical graph is a full graph, col. 12 lines 51 – 67).

49.   **As to claim 24**, see rejection for claim 21 above.

Allowable Subject Matter

50.   Claims 13 – 16 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Response to Arguments

51.   Applicant's arguments; regarding to claims 1 - 6, 20 - 27, 29 – 31, 33 – 35 have

been fully considered, but they are not persuasive; regarding to claims 7 – 12, 17 – 19,

32 have been considered but are moot in view of the new ground(s) of rejection.

52.   Applicant argued that Stone does not teach the amended limitations "users and

resources having at least two links to common to resources or users are <u>automatically</u>

<u>determined</u> to be placed on the same group", and "the users or resources did not exist

as group prior to discovery unit searching for pattern within the links" (page 15 lines 10

– 15).

In response, as mentioned during the interview, both applicant and examiner

could not find "automatically determined".   Applicant said that applicant would find the

supports for the amended limitation, and respond. As responded in an applicant

summary of interview with examiner, applicant pointed to page 3 lines 8 – 11, examiner

notes that it is in a summary of invention, not in the body of invention where the method

can be implemented.

Stone teaches the template may be used to create user groups to automatically

apply a default attributes associated with the user or group would comprise

automatically determined. Stone teaches the users or resources did not exist as group

prior to discovery unit searching for pattern within the links (new user group, 0094).

53.   Stone does not teach usage levels much less wherein …. Respective users

(page 15 lines 25 – 26).

In response, when user access to particular applications/resources, it is usage

levels of users and respective resources (0059).

54.   Applicant argued that Brown does not teach groupings on each of the subgraphs,

and then to merge the results into a full graph as to claim 22 - 23 (page 17 lines 13 –

15).

In response, each child node in hierarchical directory structures in the form of

directed acyclic graphs, is a sub-graph, col. 12 lines 51 – col. 13 line 38), and the whole

hierarchical graph is a full graph with 1 parent node and multiple child nodes (col. 12

lines 51 – col. 13 lines 38).

Conclusion

55.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to PHUONG N. HOANG whose telephone number is

(571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to

5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hyunh S. Sough can be reached on 571-272-6799. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hyung S. Sough/   /P. N. H./
Supervisory Patent Examiner, Art Unit 2194   Examiner, Art Unit 2194
01/04/10